

# PURAFLEX®

Hydrocarbon and Chemical Resistant  
Environmental Protection Barrier Membrane



Industrial Textiles  
& Plastics Ltd

PCS 2

**Project Case Studies**

[www.puraflex.com](http://www.puraflex.com)



## Project

Highway Embankments

London Road, Glasgow

## Application

Protective encapsulation and separation barrier for EPS blocks – these are commonly used to improve road embankment stability and reduce horizontal movement as well as noise and vibration dampening. A road alteration on the London Road in Glasgow exposed an area of ground which needed to be filled.

## Design Requirement

The integrity of the EPS blocks is compromised by the threat of fuel spillage from the adjacent highway. A hydrocarbon barrier is commonly used to protect the structural EPS blocks. Traditional HDPE protection was considered but the potential to protect the polystyrene infill from fuel corrosion was considered insufficient due to the time corrosive effect on the HDPE liner.

## Solution

Puraflex with welded seams encapsulated the structural EPS to provide the necessary barrier protection from hydrocarbon liquids and vapours thus ensuring the strength and durability of the blocks.

Please refer to the appropriate Product Data sheet for detailed technical specifications

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## Project

Residential Development

Days Homes, Telford

## Application

Permission to build nine new homes at Upper Bar, Newport, Shropshire was granted to Days Homes by the local council subject to a contamination investigation and satisfactory remediation solution. The 0.25 hectare brownfield site housed a former timber yard with a below-ground creosote dipping tank, leaving a legacy of widespread contamination.

## Design Requirements

Hydrocarbon barrier for a residential development on a brownfield site previously contaminated by an underground creosote tank. Previous development attempts had been unsuccessful due to the level of contamination and lack of sufficient remediation options.

## Solution

Foundations incorporating Puraflex were designed with a ventilated sub-base to evacuate any hydrocarbon vapours. Puraflex performed well and was easily installed and welded despite sub-zero temperatures.

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## Project

Commercial Development

DP World London Gateway Distribution Centre – Europe's largest logistics centre

£1.5 billion project spanning 10-15 years developing 9 million square foot of warehousing space and capacity for 3.5 million containers per year.

## Application

EPS encapsulation and Damp Proof Membrane. Expanded Polystyrene Blocks are durable, strong and light-weight making them a popular choice for civil engineering applications such as bridges, roads and car parks. For projects subject to high traffic volume and risk of fuel spillage, the blocks require secondary protection.

## Design Requirement

Hydrocarbon barrier for the protection of EPS blocks being used as the foundation of a new container handling distribution centre.

## Solution

Puraflex was used to encapsulate the EPS blocks to provide protection from fuel spillage and the rigours of heavy haulage traffic and container handling.

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## Project

Retail & Commercial Development

£5 million development over 11 months

Great Western Road, Glasgow

## Application

49 residential flats, a retail shell and car park

## Design Requirement

Hydrocarbon barrier and damp proof course for the development on an old fuel station site containing harmful contaminants. The project design required a basement sealing separation barrier.

## Solution

Prevention of migrating hydrocarbon vapours into the building was achieved using Puraflex Tank for the vertical walls and Puraflex DPC for the sub-floor supporting walls. Direct contact with contaminants ruled out the material originally specified for the job, but Puraflex provided a solution for the complex issues on this site and guaranteed complete building integrity.

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